7. Krithika

Program Name: Krithika.java **Input File: krithika.dat**

You are given an array A of length N. An integer X is a k-"array factor" of A if the bitwise AND of some k elements (not necessarily consecutive) of A is equal to X. Given A and k, find the largest k-"array factor" of A.

Input:
The first line of input is T (1 <= T <= 50), the number of test cases. The first line of each test case has space-separated integers N and k, where N (1 <= N <= 1,000) is the number of elements in the array and k (1 <= k <= N) is the sought k-array factor. The second line of each test case contains N positive integers in the range [1, 10^18], the elements of A. Note that the elements of A may not fit into a 32-bit integer data type.

Output:
For each test case, output the largest k-"array factor" of A. Format the output with the case numbers as in the samples.

Sample input:
```
3
3 2
14 159 26
4 3
1 1 1 2
5 4
1 2 3 4 5
```

Sample output:
```
Case #1: 26
Case #2: 1
Case #3: 0
```

Sample Explanation:
The 2-array factors of the first array are 14, 10, and 26. Of these, 26 is the largest.